

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P561121

Luminaire Tested: FSR-12-4-LD4-1LO-50-UNV-93-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561121
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-12-4-LD4-1LO-50-UNV-93-84-EDD
Description: 1X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2553.0 lumens
Efficiency: N/A
Efficacy: 109.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

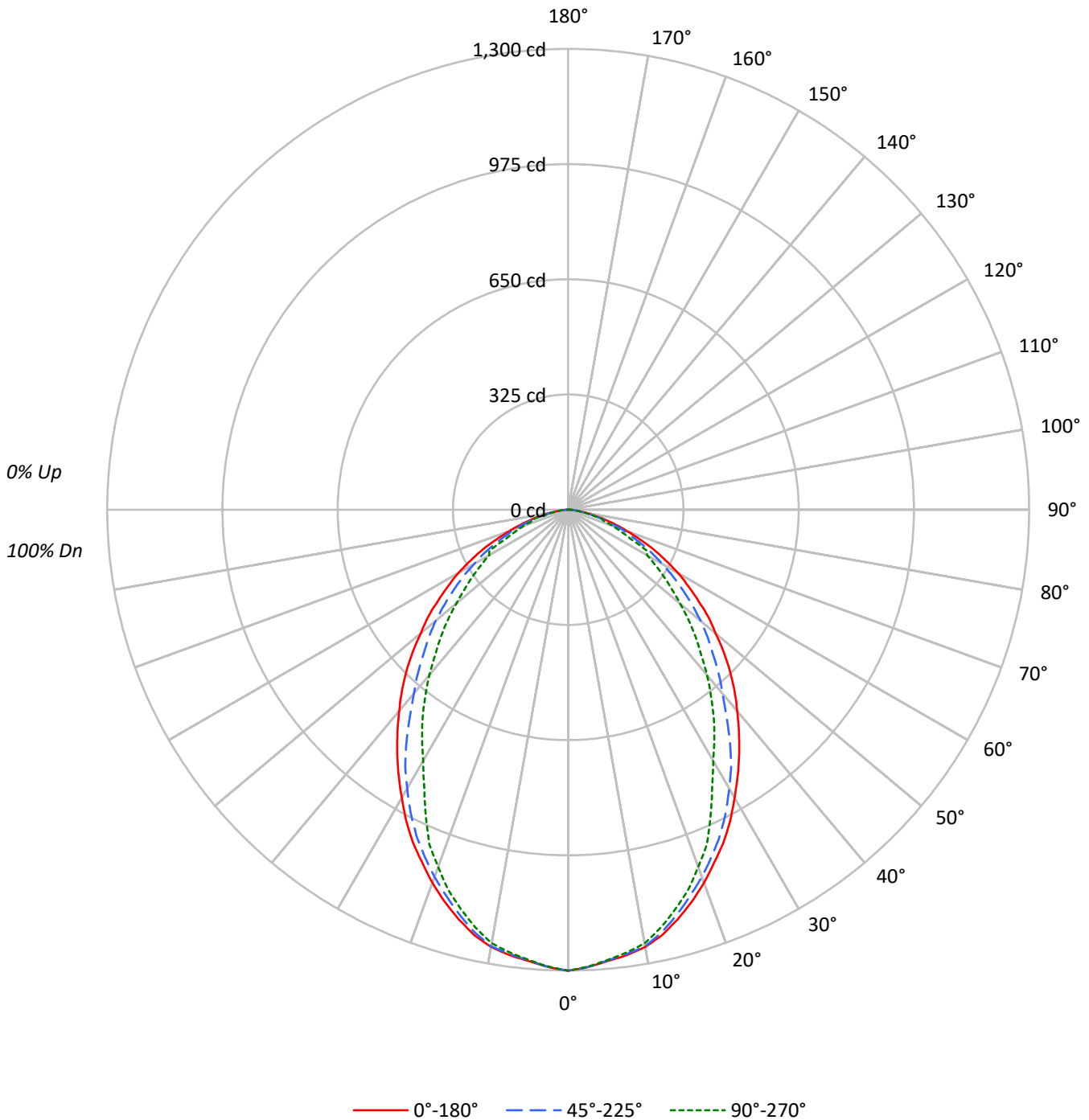
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3500	3500	3500
5°	3452	3448	3444
10°	3422	3418	3393
15°	3330	3296	3250
20°	3208	3156	3070
25°	3076	3009	2821
30°	2915	2822	2541
35°	2761	2608	2351
40°	2604	2376	2139
45°	2455	2197	1934
50°	2272	2039	1724
55°	2102	1848	1545
60°	1926	1651	1384
65°	1694	1445	1225
70°	1396	1266	1041
75°	1109	969	1016
80°	745	699	652
85°	463	556	648

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2455 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.1	4.7
10°-20°	332.2	13.0
20°-30°	459.9	18.0
30°-40°	490.4	19.2
40°-50°	447.4	17.5
50°-60°	350.5	13.7
60°-70°	228.5	8.9
70°-80°	101.2	4.0
80°-90°	21.7	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	913.2	35.8
0°-40°	1403.7	55.0
0°-60°	2201.6	86.2
0°-90°	2553.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2553.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1300	1300	1300	1300	1300	
5°	1278	1276	1276	1275	1275	121
15°	1195	1195	1183	1171	1167	336
25°	1036	1030	1013	977	950	476
35°	840	834	794	734	716	525
45°	645	631	577	529	508	497
55°	448	434	394	347	329	402
65°	266	251	227	232	192	262
75°	107	99	93	89	98	114
85°	15	16	18	20	21	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1300.5	1300.5	1300.5	1300.5	1300.5
2.5°	1291.4	1291.4	1291.4	1289.9	1289.9
5°	1277.9	1276.4	1276.4	1274.9	1274.9
7.5°	1267.4	1265.9	1264.4	1262.9	1259.9
10°	1252.4	1252.4	1250.9	1243.3	1241.8
12.5°	1228.3	1226.8	1220.8	1210.3	1207.3
15°	1195.2	1195.2	1183.2	1171.2	1166.7
17.5°	1159.1	1157.6	1142.6	1130.6	1124.6
20°	1120.1	1117.0	1102.0	1082.5	1071.9
22.5°	1076.5	1076.5	1058.4	1032.9	1022.3
25°	1035.9	1029.8	1013.3	977.2	950.2
27.5°	989.3	980.2	962.2	911.1	879.5
30°	938.1	933.6	908.1	841.9	817.9
32.5°	890.0	882.5	855.4	786.3	766.7
35°	840.4	834.4	793.8	733.7	715.6
37.5°	790.8	783.3	732.2	684.1	661.5
40°	741.2	732.2	676.5	632.9	608.9
42.5°	694.6	682.6	628.4	581.8	554.8
45°	645.0	631.4	577.3	529.2	508.2
47.5°	595.4	583.3	533.7	484.1	460.0
50°	542.7	532.2	487.1	437.5	411.9
52.5°	499.1	482.6	439.0	389.4	368.3
55°	448.0	434.5	393.9	347.3	329.3
57.5°	401.4	387.9	350.3	306.7	291.7
60°	357.8	338.3	306.7	269.1	257.1
62.5°	309.7	294.7	267.6	236.0	251.1
65°	266.1	251.1	227.0	231.5	192.4
67.5°	218.0	210.5	189.4	168.4	162.4
70°	177.4	168.4	160.9	138.3	132.3
72.5°	141.3	132.3	121.8	109.8	105.2
75°	106.7	99.2	93.2	88.7	97.7
77.5°	73.7	70.7	66.2	61.6	60.1
80°	48.1	46.6	45.1	43.6	42.1
82.5°	28.6	28.6	28.6	28.6	28.6
85°	15.0	16.5	18.0	19.5	21.0
87.5°	9.0	9.0	10.5	12.0	13.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)